

The Atomic Bomb and the Defense of the Free World

Author(s): Vannevar Bush

Source: *Bulletin of the American Association of University Professors (1915-1955)*, Vol. 37, No. 2 (Summer, 1951), pp. 345-350

Published by: American Association of University Professors

Stable URL: <http://www.jstor.org/stable/40220820>

Accessed: 02-01-2016 14:15 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



American Association of University Professors is collaborating with JSTOR to digitize, preserve and extend access to *Bulletin of the American Association of University Professors (1915-1955)*.

<http://www.jstor.org>

THE ATOMIC BOMB AND THE DEFENSE OF THE FREE WORLD¹

By VANNEVAR BUSH

Carnegie Institution of Washington

The Committee on the Present Danger is beginning tonight a series of weekly broadcasts on the peril that faces the American people and on how it can be met. The Committee is a nonpartisan group of citizens who have organized to work together as the nation prepares to safeguard freedom. I have never been a "joiner," as we call them on Cape Cod, but I believe so strongly in what this Committee stands for that I am glad to be a member of it. We believe the nation's preparation to meet the danger must be on the same scale as the danger itself. We believe balanced armed forces are the heart of such preparation. And we believe the utmost speed is essential. I have been asked to begin this series with a reckoning of the probabilities of the defense of the free world, and how the atomic bomb affects them.

There is no doubt of the desire of the American people—and of our friends. We wish to avoid war. We wish to preserve our freedom and the free way of life. In a world where aggressive dictators are still at large, there is but one way to achieve these ends. That way is—to be strong. I am confident that the American people realize this. But we need to study just how to build that needed strength.

The key to the matter, in my opinion, is the A-bomb. At the end of the war our allies were exhausted. We disarmed. We know what has happened. Russia moved in. Working by intrigue and by the subversive overthrow of governments, she took over enormous territory and millions of people. But Russia stopped. Russia stopped at the boundary where the Kremlin was

¹ Address to the nation, delivered Sunday, March 4, 1951, over the Mutual Broadcasting System network for the Committee on the Present Danger. This Committee is a voluntary, nonpolitical, nongovernmental group of individuals. Its office is located at 711 Fourteenth Street, N.W., Washington 5, D.C.

sure there would be war with us if it proceeded further. We saw the matter tested out at the time of the air lift in Berlin, and we know when we confronted the Russians with true strength they did not force the issue.

The deterrent is nearly as powerful today as it was then. If Russia sent its armies rolling across the German plains tomorrow, we with our A-bombs and the planes to carry them would destroy Russia. We could do it without question as matters stand today. We could destroy not only the key centers from which her armies would be supplied, but also political centers and the communications of the armies on the march. Initially equipped with weapons and supplies, those armies might keep rolling for a time, but there would be no Russia behind them as we know it today. The answer to this is that the armies will not roll. No all-out war is in sight for the immediate future unless they or we make some very serious error indeed. If Russia knows that she cannot go beyond certain boundaries without provoking war, she will not pass those bounds; no war will occur. This has been well shown in recent years. The only apparent exception is in Korea, and there we did not make our position clear.

The difficulty is that we cannot count indefinitely upon strategic bombing as the sole means of averting war. Today, it gives us a military stalemate. To maintain that stalemate is the real problem.

Defenses against strategic bombing have been mounting ever since the war. Jet pursuit ships controlled by ground radar can be enormously effective in bringing down high-flying bombers. Russia with its vast distances can have extensive early warning radar networks to alert its defenses. She can have great fleets of jet pursuit ships for defense, accurately controlled from the ground night and day. She can also have about her key positions modern antiaircraft artillery and also perhaps ground-to-air guided missiles. Russia in time can thus protect her key points. Note that I say in time. She cannot do it now. She cannot at any time safeguard all the places in Russia we might wish to attack. But in time there is a strong probability that she can defend key points to the extent that we could not penetrate to them without prohibitive attrition. She is also building a stock of A-bombs of her own. The deterrent of our A-bombs is real. But we cannot count on

its remaining fully effective forever. I trust we have time—time to prepare the defenses that will continue the balance and avert war. But we do not have time to waste.

II

These defenses center in an allied army in Europe capable of holding a defensive line, stopping the Russian hordes if they should ever start, and so dissuading them from starting. That army must be well trained and it must be supplied with the very best of weapons of every sort. It must be created before our present enormous atomic advantage is seriously lessened. Of course it needs to be combined with continued development of our striking air force and support of our Navy to keep the seas open, but there must be an army in being and on the spot capable of holding back the hordes of Russia. Such an army does not now exist.

This need by no means be a matter of opposing hordes by hordes. We have no idea whatever of invading Russia by land, nor should we develop any such idea. Ours should be a defensive line, a line to hold back the hordes while we strike by other means.

Many elements enter into this. In the first place, take the matter of tanks. Russia has 40,000 tanks of various sorts. All her military doctrine revolves about the use of tanks and artillery. But there have been developed in the last few years antitank weapons of great power. Relatively small recoilless antitank guns mounted on a jeep or handled by four men can put a heavy tank out of business, with a high probability of doing it before the enemy can get off his first shot, even at ranges of 1500 to 2000 yards. These guns can be built in quantity by the hundreds for the cost of a single heavy tank. When the countryside is infested by stingers of this sort no tanks are going to roam that countryside long. There will still be a function for the light tank and for armored vehicles of various sorts. But the big tank has met its match, and unless techniques change in a way that I do not now see it will become a liability rather than an asset in due time. I do not say that the big tank is now obsolete; I do say we can make it obsolete if we put our minds to the job and build the things to counter it. With that problem settled, the defense of Europe is simpler.

There is another factor, moreover, which is of enormously great

importance. Out in the Nevada desert there have recently been a number of explosions. Presumably they mean the testing of new types of A-bombs developed by the Atomic Energy Commission during the past five years. I will not speculate as to their nature, but we can certainly assume that we have not been idle and that we have more effective bombs today than we had five years ago. They may indeed be far more adaptable for a very important purpose.

We have thought of the A-bomb as a means for attacking great military production facilities or centers of political power. The A-bomb can also have important tactical uses. Suppose that a war were to break out three or five years from now and that the Russian hordes were held up by a much smaller number of well-disciplined and well-armed divisions. If the line were not too thinly held, if it were defended in depth with the land mines, anti-tank obstacles, artillery, and other weapons that we can have if we choose, how would the Russians break it? They could do so only by a huge concentration of armies, artillery, and tanks—the kind of thing the Nazis did in 1944 just before the Battle of the Bulge. But with A-bombs in existence this becomes a very different matter. An A-bomb delivered upon such a concentration by an airplane, or possibly by use of a gun or a guided missile, would be devastating. In its presence, concentration of this sort would not make sense. Tactical use of the A-bomb thus will help to make the defense of Europe with reasonable numbers of men a practicable matter.

Further, Europe is regaining courage and spirit. The mission of General Eisenhower and the evident determination of the American people are aiding greatly in that regard. We can join our strong and well-trained troops with those of our allies in Europe—we must assemble them in such numbers that they can hold the line. When enough men are mustered, there are important technical innovations to enable them to hold such a line against vastly superior numbers. It is not a matter of meeting hordes with hordes. Yet with even the most subtle of modern weapons there must be men to maintain the line and men to wield the weapons if they are to be effective.

III

I trust therefore that in our provision of manpower we will look well to the future. There is no thought in my mind that the men we bring in for training now will have to fight soon. Rather I think they will be the beginning of a well-trained, well-organized reserve. We need not only an army in being on the spot, but also behind it masses of trained men who can be called, if it becomes necessary, without a long period of indoctrination. If total war ever comes again it will break suddenly. I believe that the way to accomplish this purpose is to induct 18-year-olds to have approximately two years training and service and thereafter to go into the reserve to build up the essential body of trained men.

We cannot build the forces we need without sacrifice. This sacrifice must come in many ways, in foregoing some of the pleasures we like to enjoy, in increased taxes and heavier burdens, and above all in the selflessness of our youth as they devote a part of their lives to training for the defense of decency and freedom. In my opinion we shall produce less interruption in the life of the youngster if we train him in the years of 18 and 19, after he has finished high school and before he launches his permanent career. Moreover, the earlier the training starts, the longer will men be available for the reserve. It takes young men to fight a war.

As I said when I started this talk, the object of the free world is not to fight a war but to avoid the necessity of fighting. If we are wise I feel sure that we can avoid that necessity. We have today an able group of military leaders. We have a strength which Russia fears. The Kremlin will not strike unless it makes a mistake or unless we by the utmost foolishness cause it to make a false move in the belief that it can do so without bringing our retaliation upon it. We must keep such strength that we cannot be overwhelmed, such strength that to attack us would be suicidal. If we do, the attempt will not be made and we can live without a World War III. The sacrifices we shall make to that end, heavy though they may be, will be small indeed compared to the sacrifices we would make if through weakness or hesitancy we allowed a war to come upon us.

Nor does America stand up to Russia alone. Russia today faces the entire free world, of enormous production capacity and enormous numbers of men, a vigorous free world. The free world has

no idea of making war on Russia. But it is determined to live in peace and to be strong in order to do so. We of the United States have great allies. They are temporarily in some distress, for they suffered grievously during the war. But their might is rising. France is rising with all of its great traditions of strength and independence. Britain is rising with its pride at having maintained the peace of Europe by its strength for many years. So are other allies as well. Their growing strength combined with ours can be made ample to stand off the present danger. If it is held in check that danger will in time fade. We will face the threat shoulder to shoulder, and facing it thus we will keep the peace.

Committee on the Present Danger: Julius Ochs Adler, Raymond B. Allen, Frank Altschul, William Douglas Arant, James Phinney Baxter III, Laird Bell, Lewis H. Brown, Harry A. Bullis, Vannevar Bush, Will L. Clayton, James B. Conant, Robert Cutler, R. Ammi Cutter, Harold W. Dodds, Charles Dollard, William J. Donovan, Truman K. Gibson, Jr., Meta Glass, Edward S. Greenbaum, Monte M. Lemann, William L. Marbury, William C. Menninger, Frederick A. Middlebush, John Lord O'Brian, Robert P. Patterson, Howard C. Petersen, Stanley Resor, Theodore W. Schultz, Robert E. Sherwood, Robert G. Sproul, Robert L. Stearns, Tracy S. Voorhees, Henry M. Wriston.